

A nighttime photograph of a busy city street, likely in Lisbon, Portugal. The image is taken from an elevated position, looking down a multi-lane highway. The street is filled with light trails from cars, creating a sense of motion. Tall buildings line the street, their windows glowing with lights. The overall color palette is dominated by the warm yellows and oranges of the streetlights and the cool blues and greys of the buildings and sky. The text 'Lisbon Council' is overlaid at the top in white, and the main title 'GETTING READY FOR THE LIFELONG LEARNING SOCIETY' is centered in the middle in white and pink. Two horizontal black lines are positioned above and below the main title.

Lisbon Council

GETTING READY FOR THE LIFELONG LEARNING SOCIETY

Digitalisation



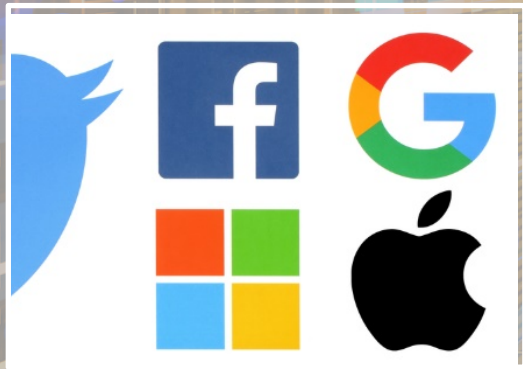
Democratizing



Particularizing



Empowering



Concentrating

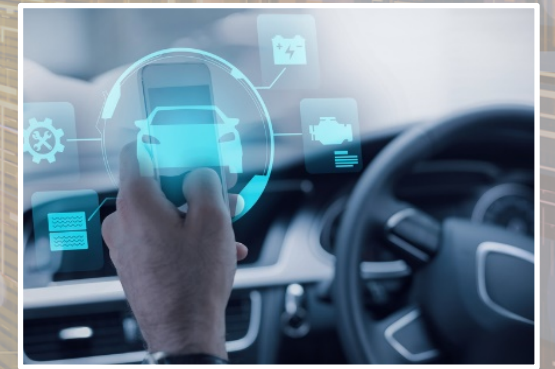
Scale without mass

Google

1m \$ / employee



120 k\$ / employee

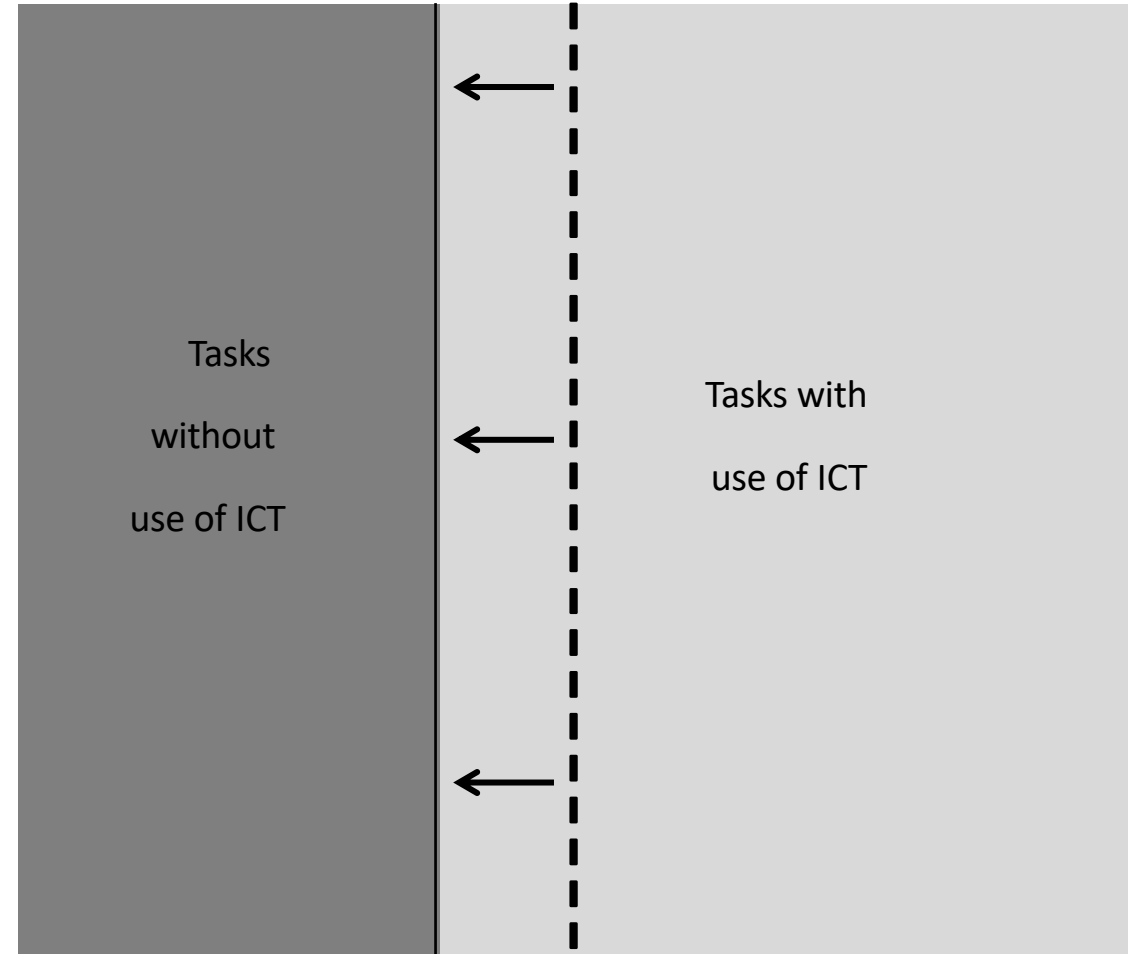
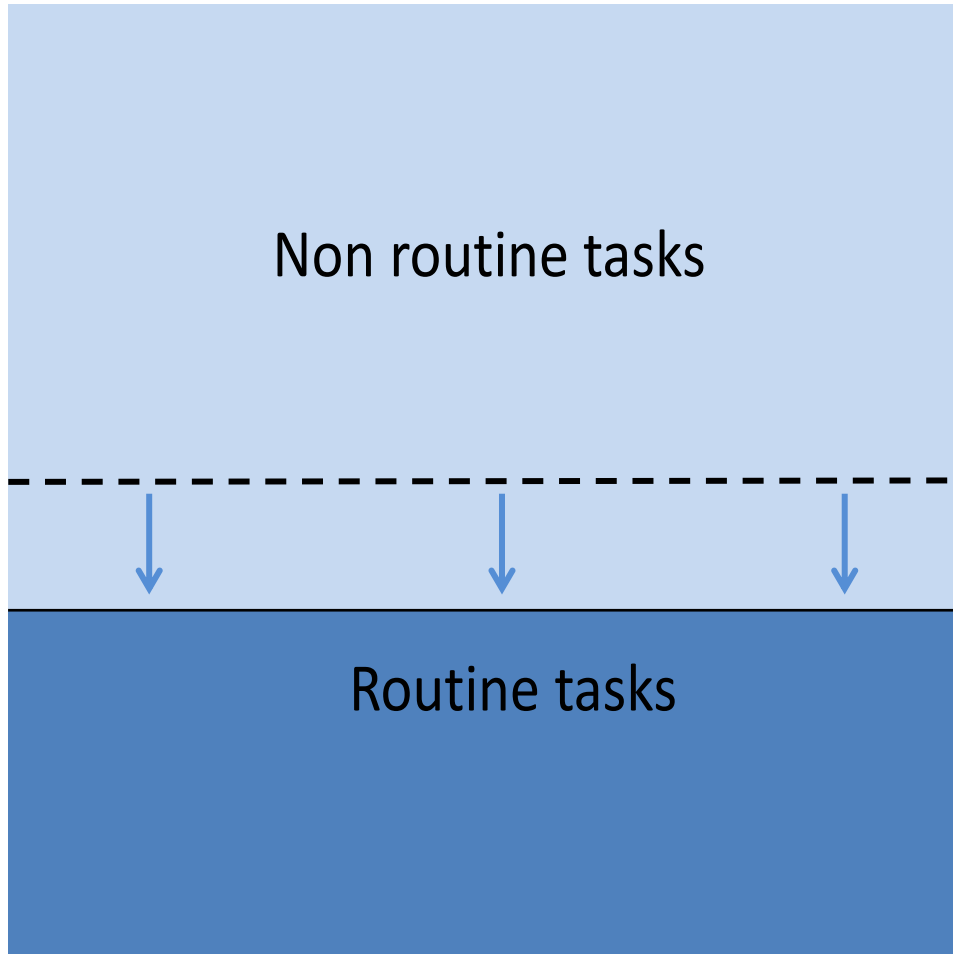


Disempowering

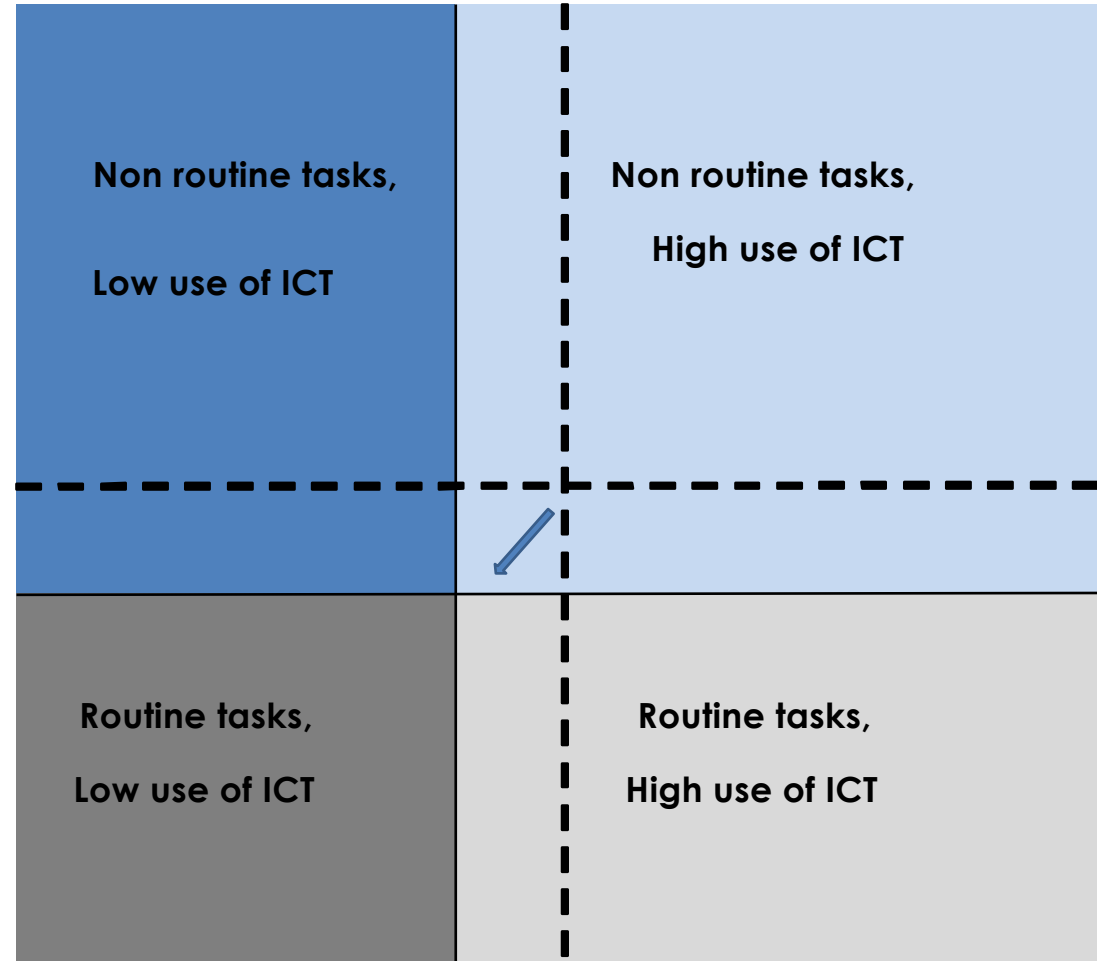
The new nature of the firm

- Digital “**platform**” **technology** drives the (re)organisation of firms
- **Small units** of employment with global reach require re-think of what “small” means (employment or revenue to market share)
- Peer-to-peer markets are **blurring the distinction between a consumer and a business**
- Governments **work with platforms** to implement policies

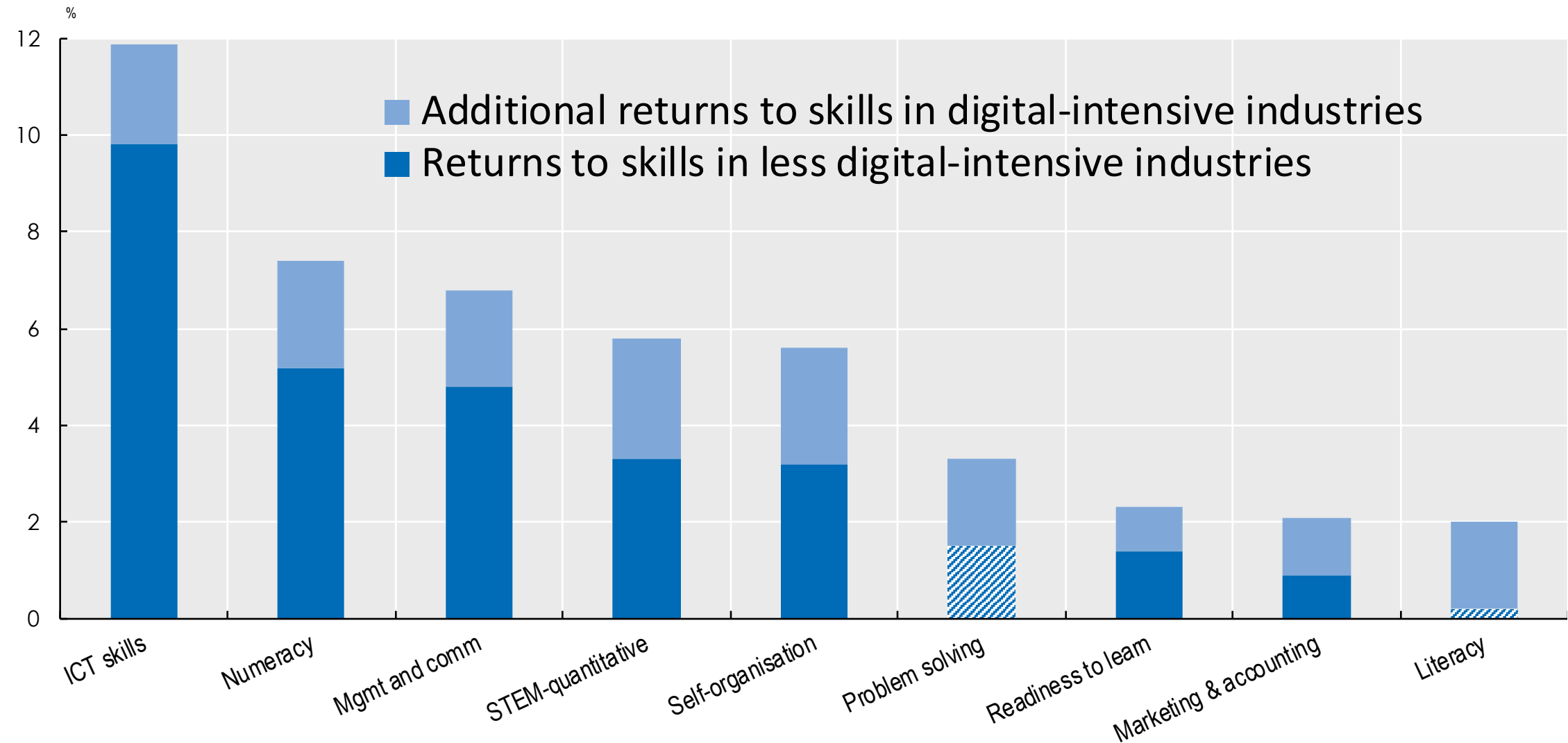
TWO EFFECTS OF DIGITALISATION



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Additional returns to skills in digital-intensive industries



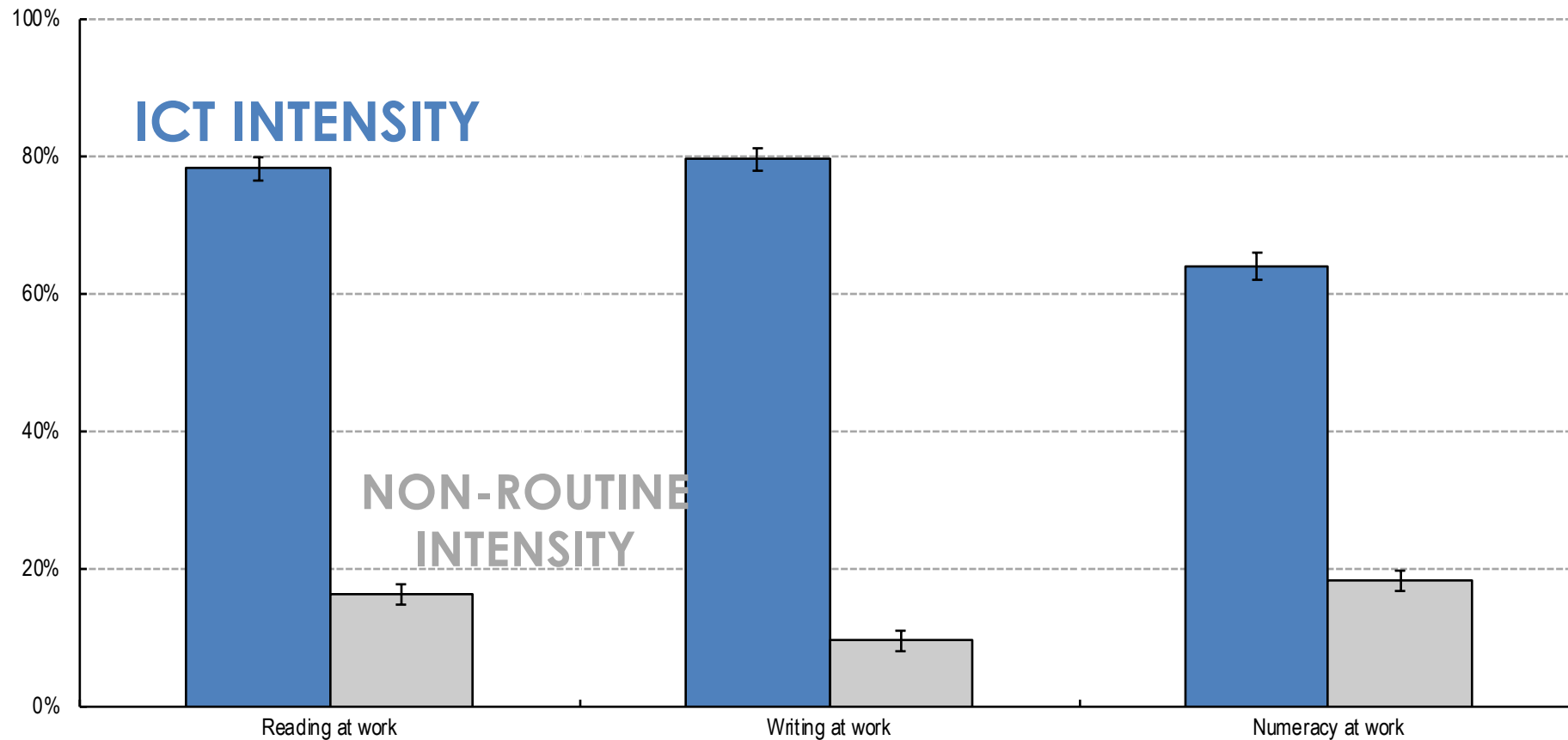
 not significant

Source: [OECD Science, Technology and Industry Scoreboard 2017](https://www.oecd.org/science/technology-and-industry/scoreboard/2017/) , Statlink: <http://dx.doi.org/10.1787/888933617472>

See: Grundke et al. (2018), [Which skills for the digital era? Returns to skills analysis](#)

ICT USE AND NON-ROUTINE INTENSITY INCREASE COGNITIVE SKILL USE

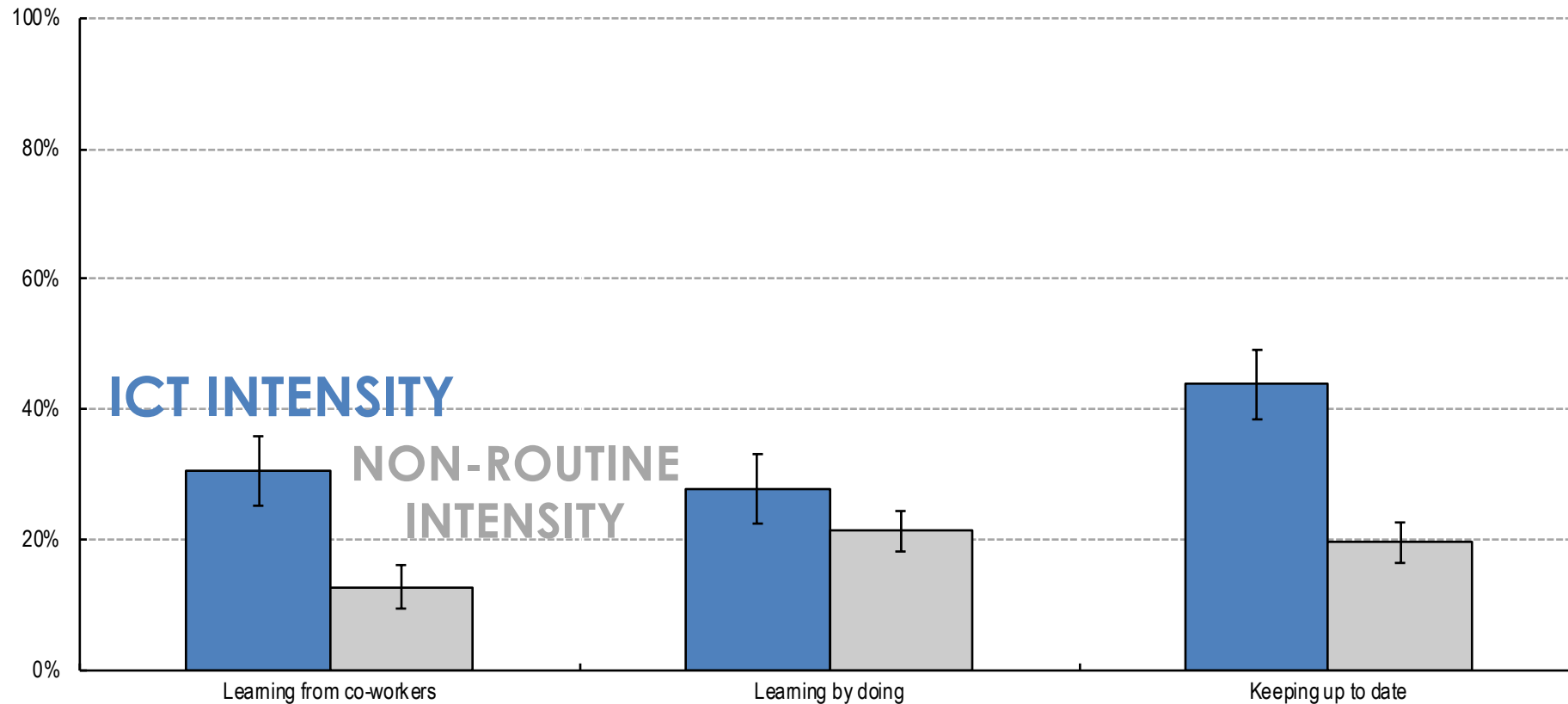
EXPECTED EFFECT OF INCREASE FROM 50TH TO 75TH PCTILE OF DIGITAL EXPOSURE ON
COGNITIVE SKILL INTENSITY



Source: Survey of Adult Skills (2012, 2015)

ICT USE AND NON-ROUTINE INTENSITY ENHANCE FORMS OF LEARNING

EXPECTED EFFECT OF INCREASE FROM 50TH TO 75TH PCTILE OF DIGITAL EXPOSURE ON
PROBABILITY OF LEARNING AT LEAST ONCE A WEEK

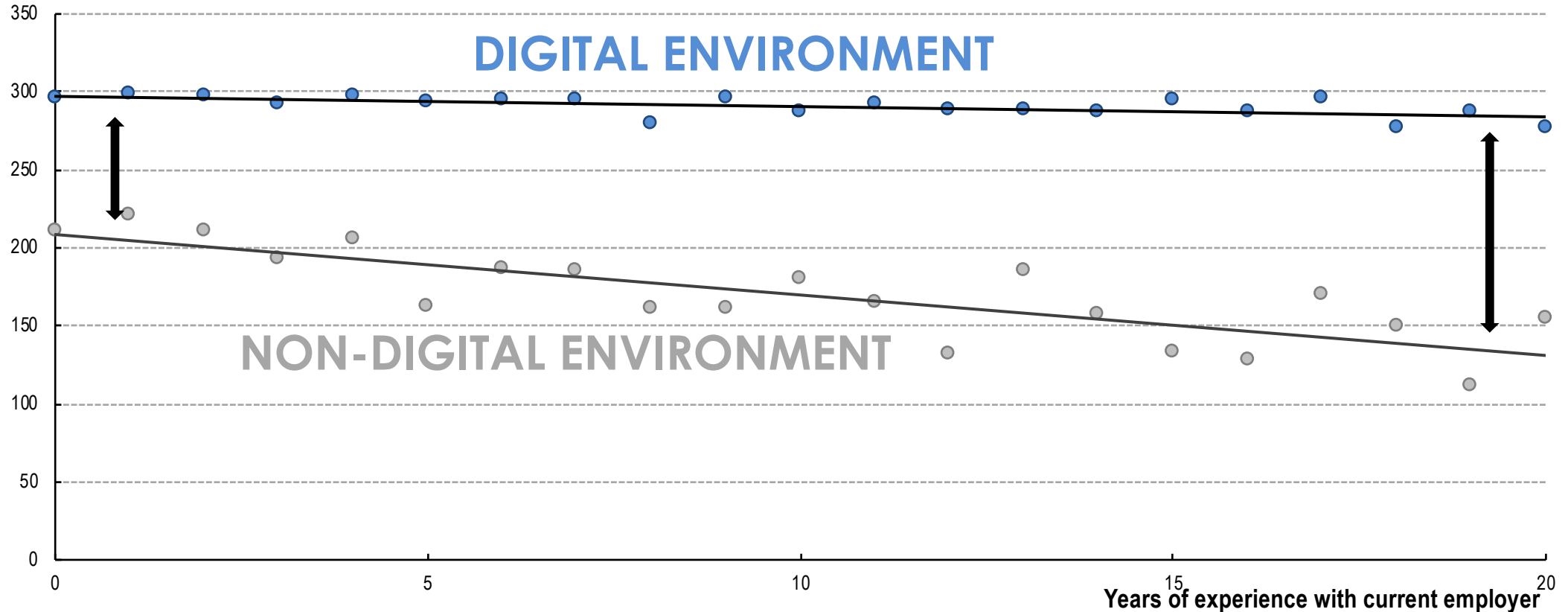


Source: Survey of Adult Skills (2012, 2015)

PROBLEM SOLVING SKILLS **IMPROVE** WITH **PROLONGED DIGITAL EXPOSURE**

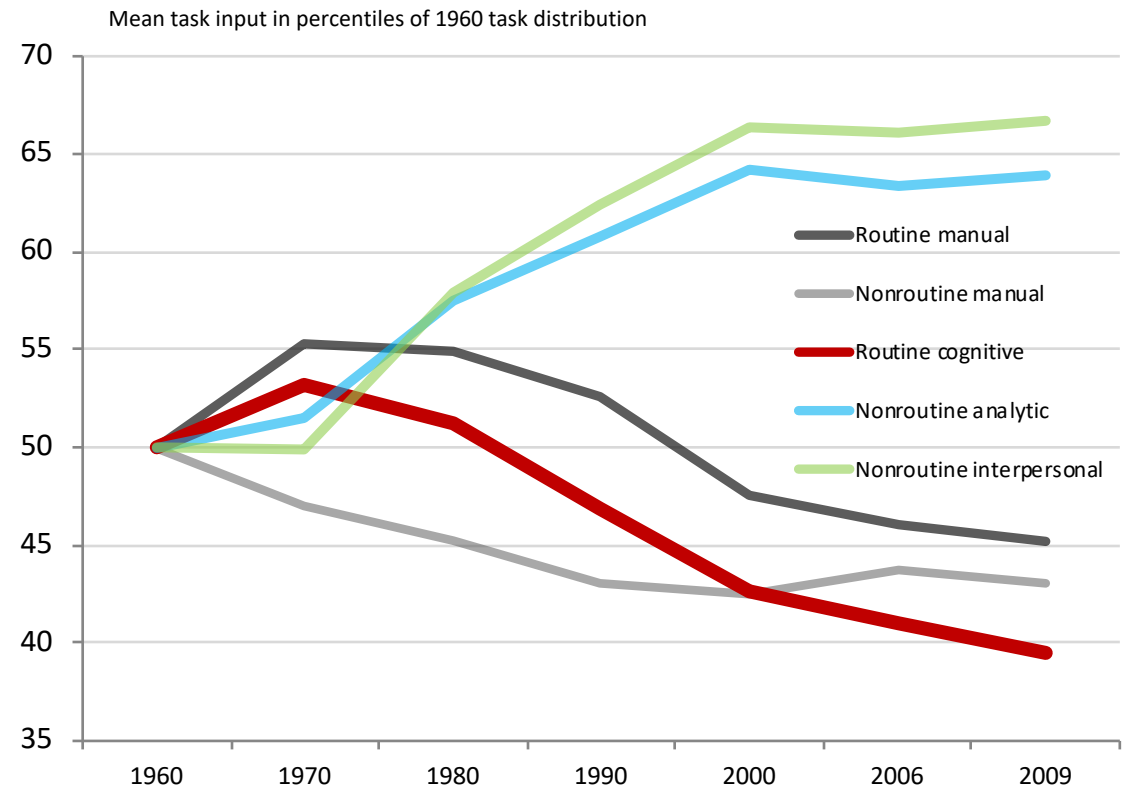
AVERAGE SCORE IN PROBLEM SOLVING IN TECHNOLOGY-RICH ENVIRONMENTS OF
WORKERS IN **DIGITAL** AND **NON-DIGITAL** ENVIRONMENTS

Problem-solving skills in technology-
rich environments

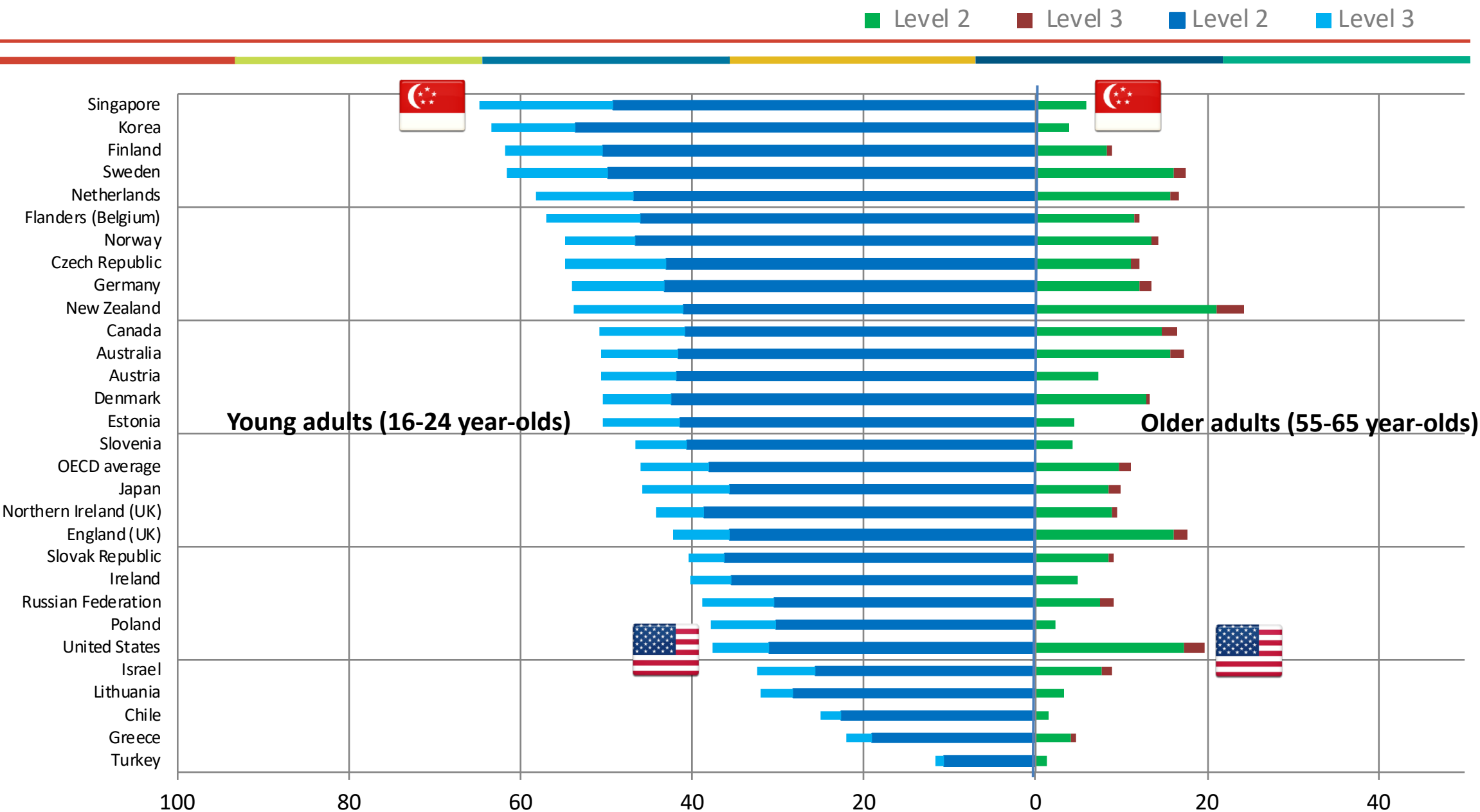




The kind of things that are easy to teach are now easy to automate, digitize or outsource

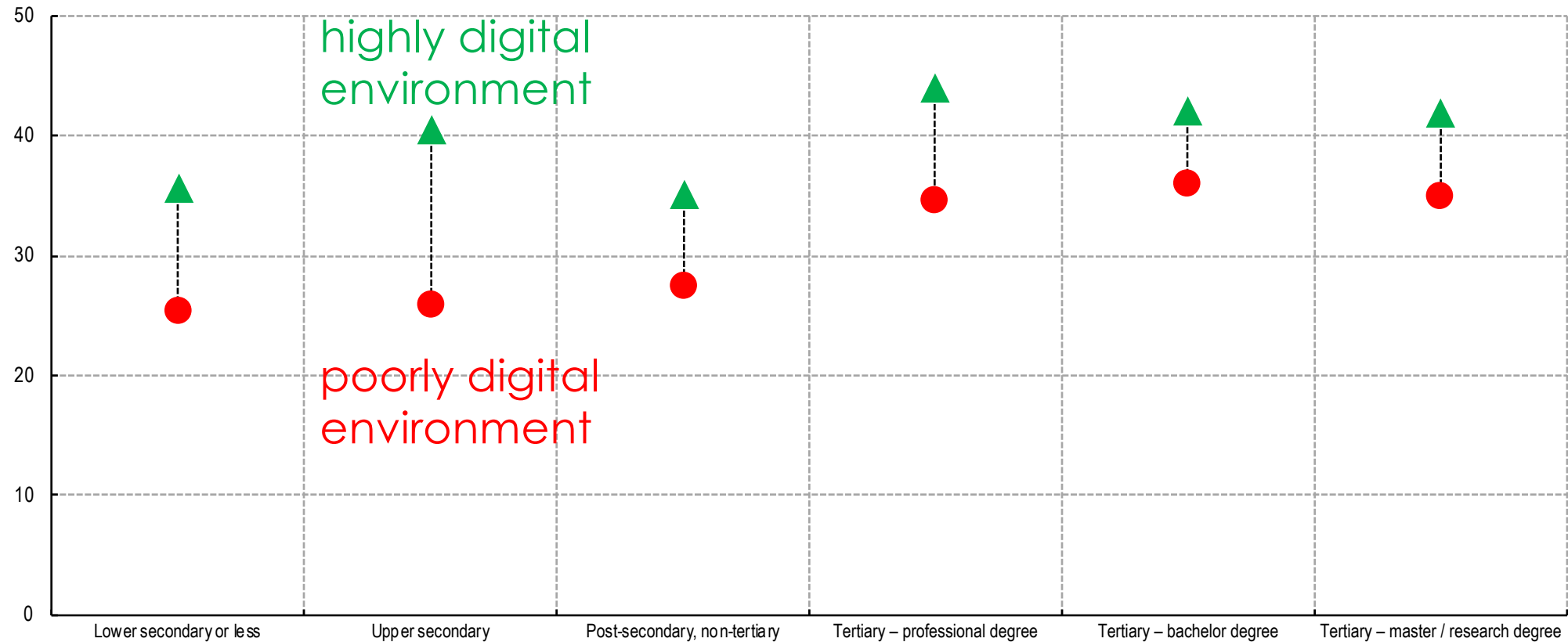


Skills to manage complex digital information



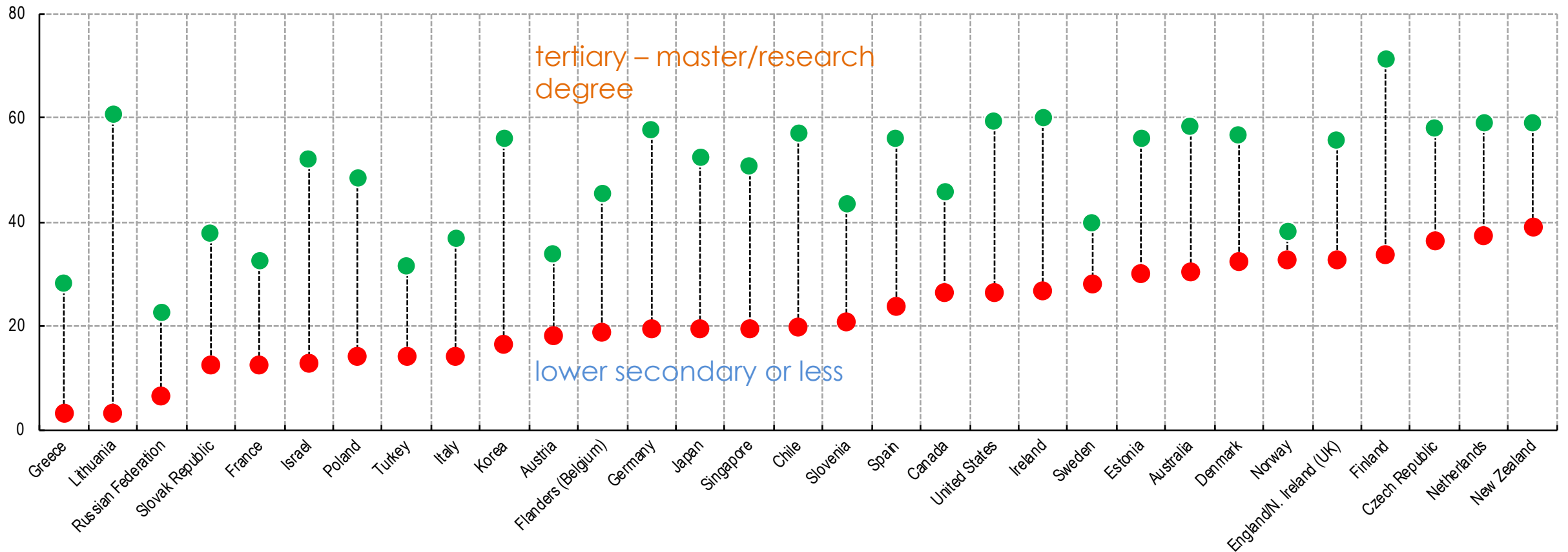
DIGITALISATION RAISES NEEDS FOR TRAINING

SHARE OF WORKERS REPORTING NEEDING FURTHER TRAINING FOR THEIR JOB BY EDUCATION LEVEL
(%)



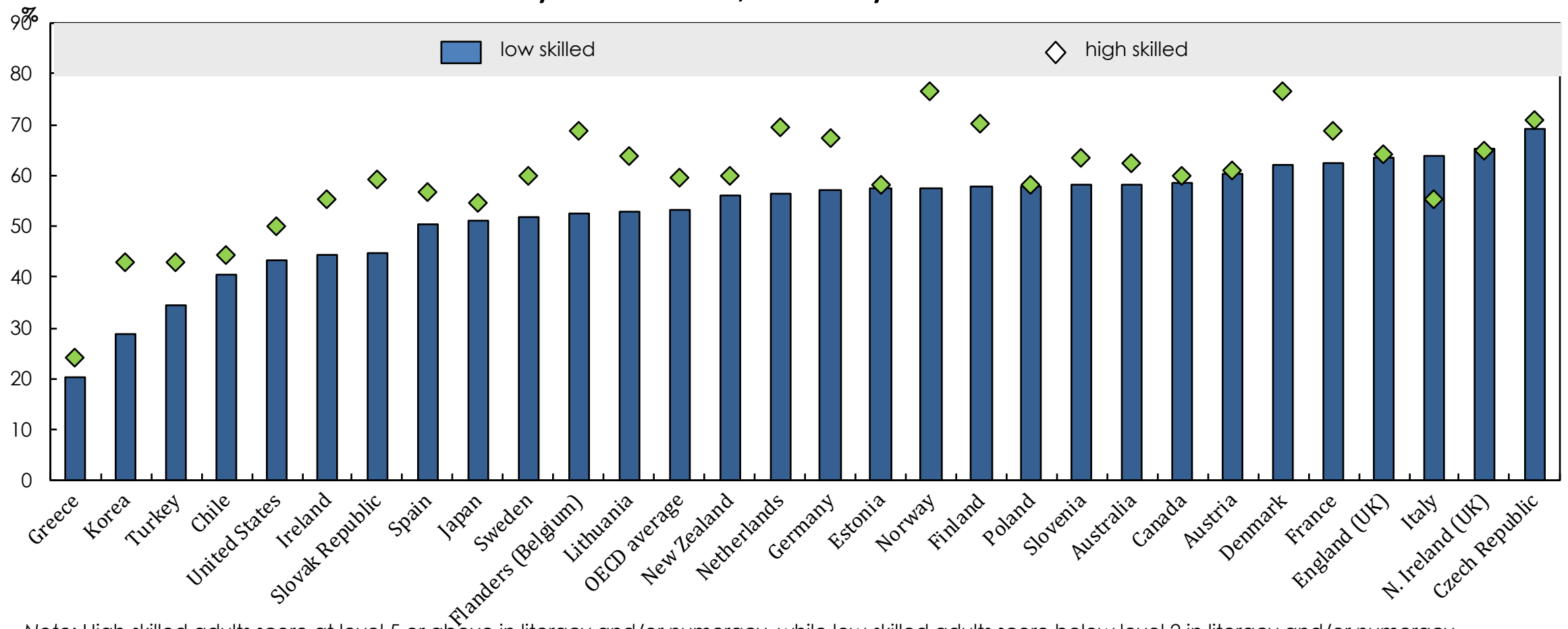
BUT: LOW-SKILLED ARE LESS LIKELY TO PARTICIPATE IN TRAINING

SHARE OF WORKERS WHO PARTICIPATED IN ON-THE-JOB TRAINING IN THE PREVIOUS YEAR
BY EDUCATION LEVEL (%)



Financial measures do not reach the groups most in need

% of employees receiving **employer financial** support for education or training, by skills level, 25-64 year-olds

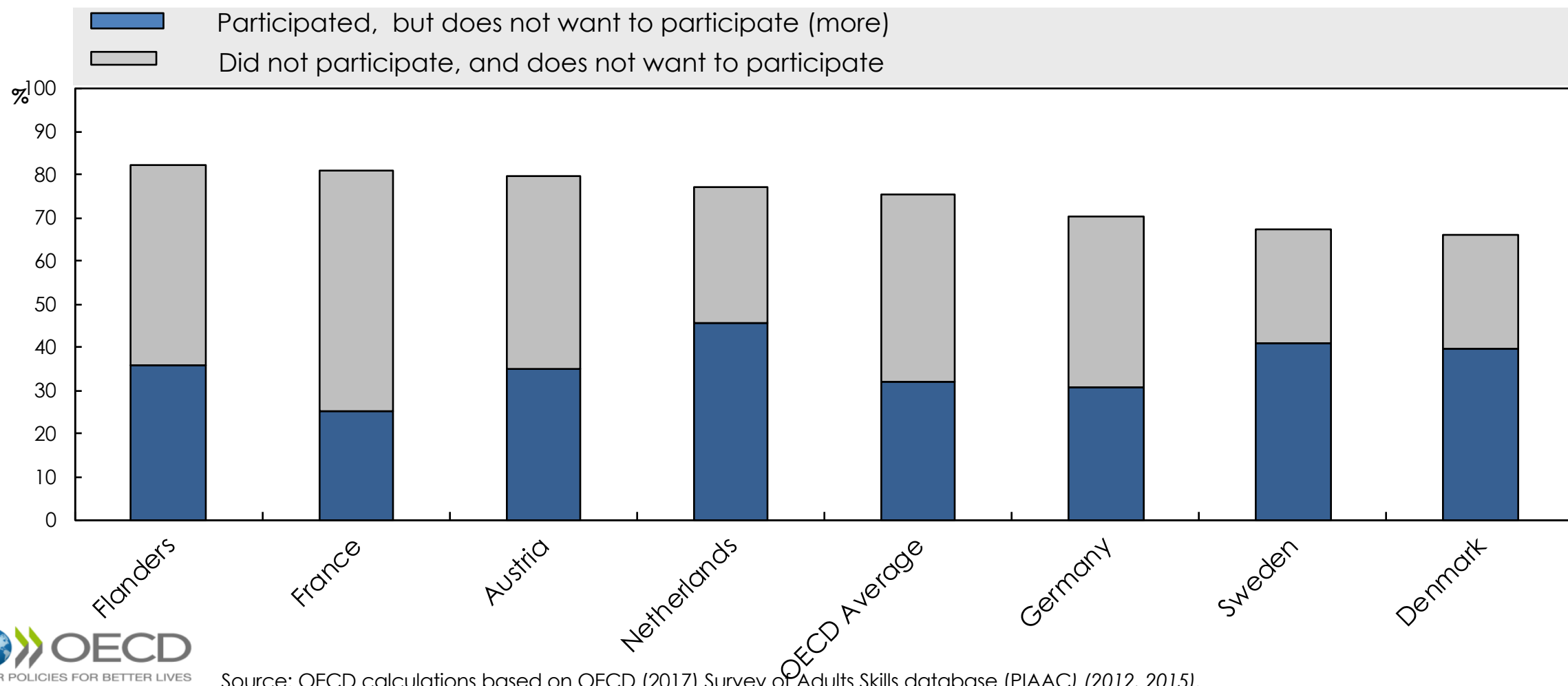


Note: High-skilled adults score at level 5 or above in literacy and/or numeracy, while low-skilled adults score below level 2 in literacy and/or numeracy.

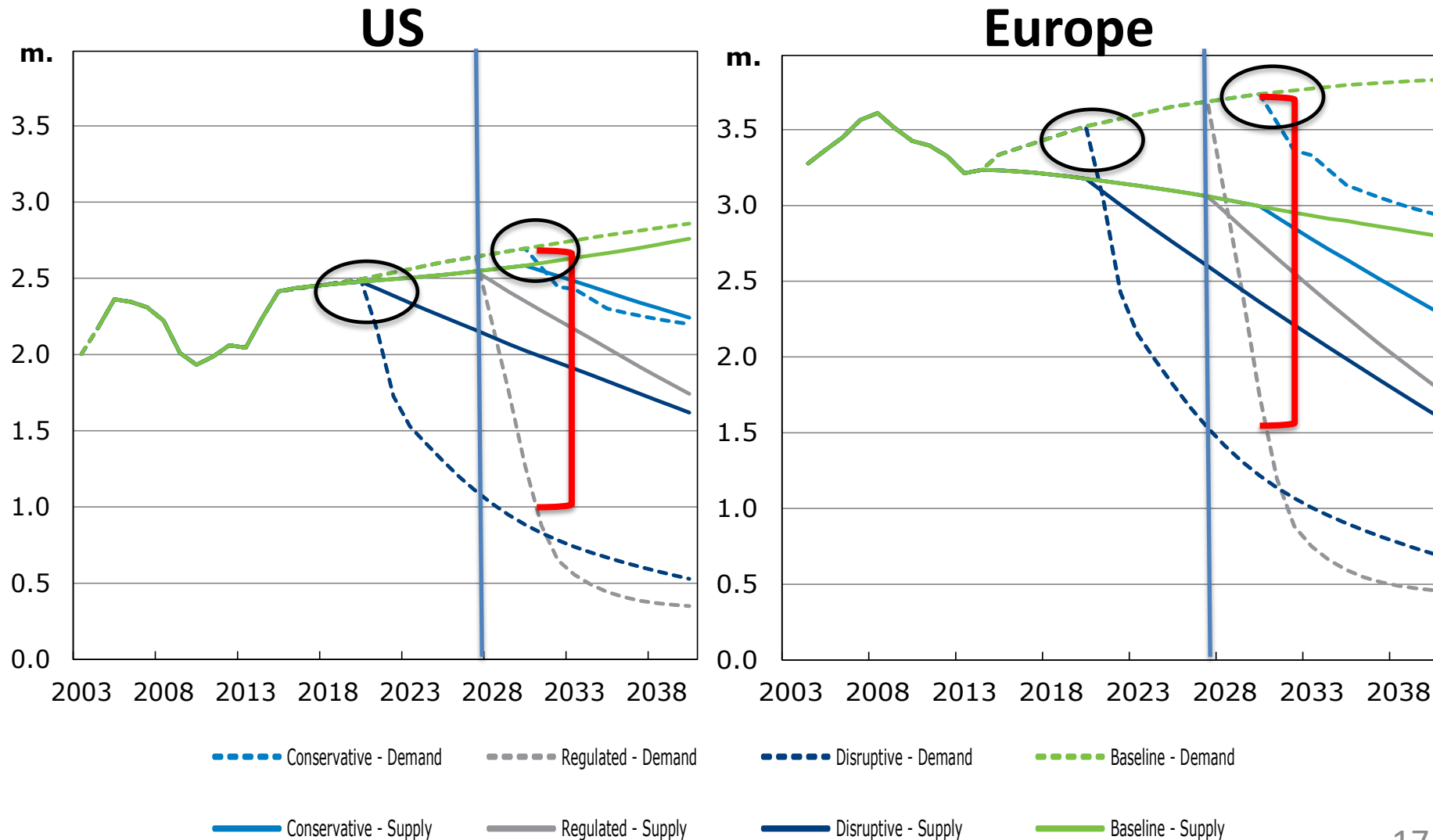
Source: OECD (2018), OECD calculations based on Survey of Adults Skills database (PIAAC) (2012, 2015), www.oecd.org/skills/piaac.

Willingness to participate in adult learning is low

Adults not willing to participate, % of 25-64 year-olds, 2012/2015

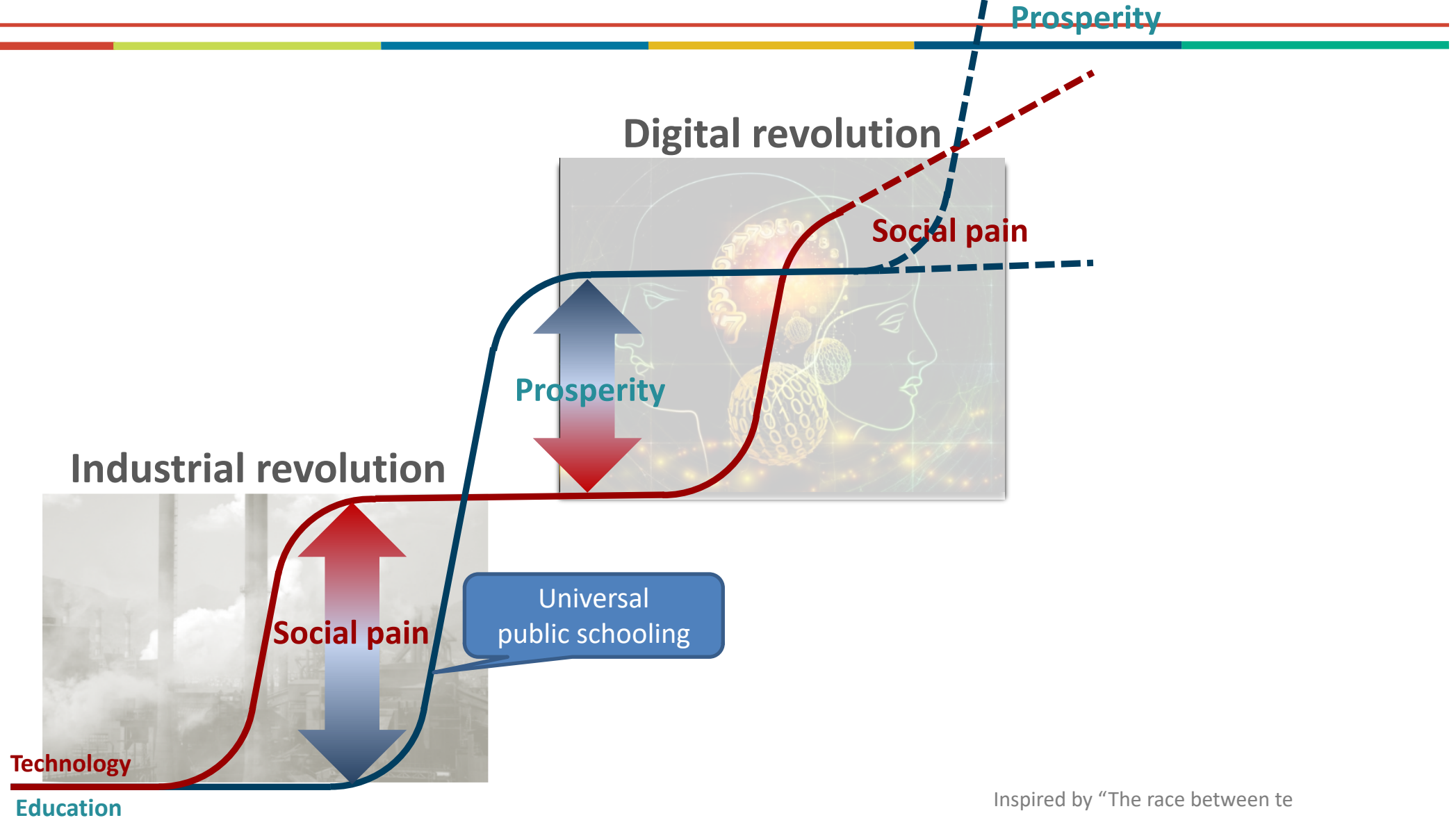


Projected supply and demand for truck drivers



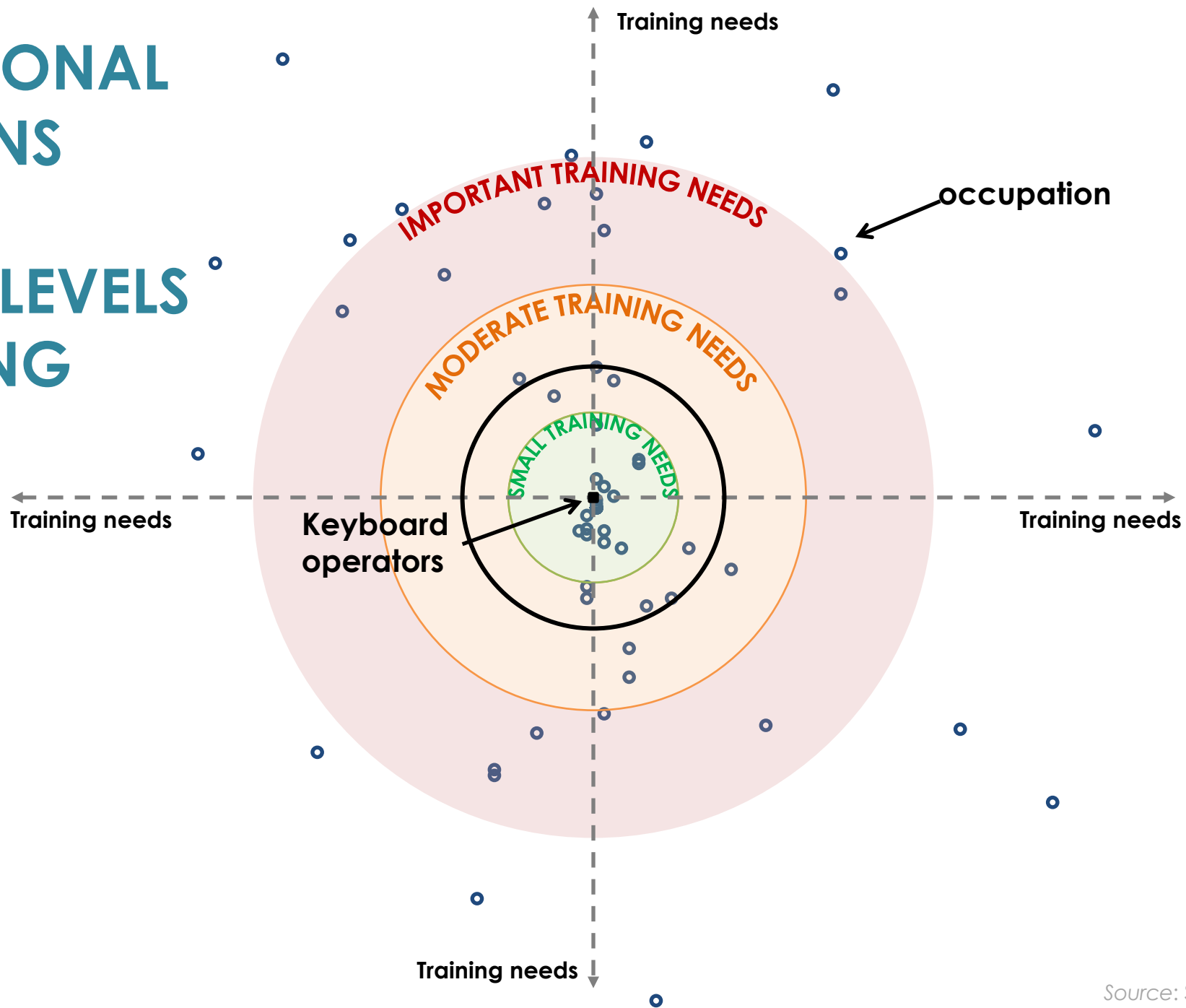
Source: ITF (2017), *Managing the Transition to Driverless Road Freight transport*, Paris.

The Race between **Technology** and **Education**

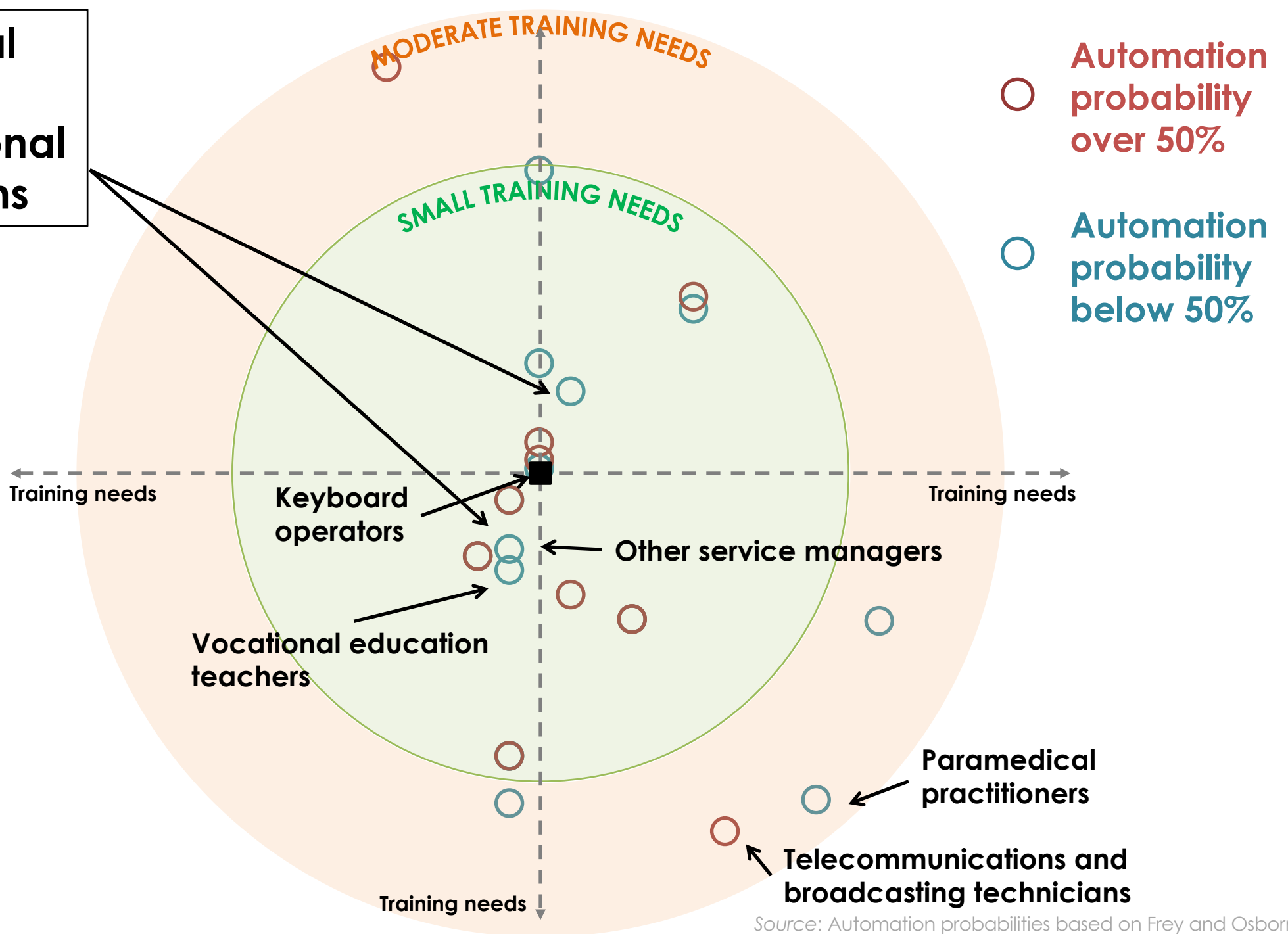


Inspired by "The race between technology and education"
Pr. Goldin & Katz (Harvard)

OCCUPATIONAL TRANSITIONS INVOLVE DIFFERENT LEVELS OF TRAINING NEEDS



**Potential
viable
occupational
transitions**

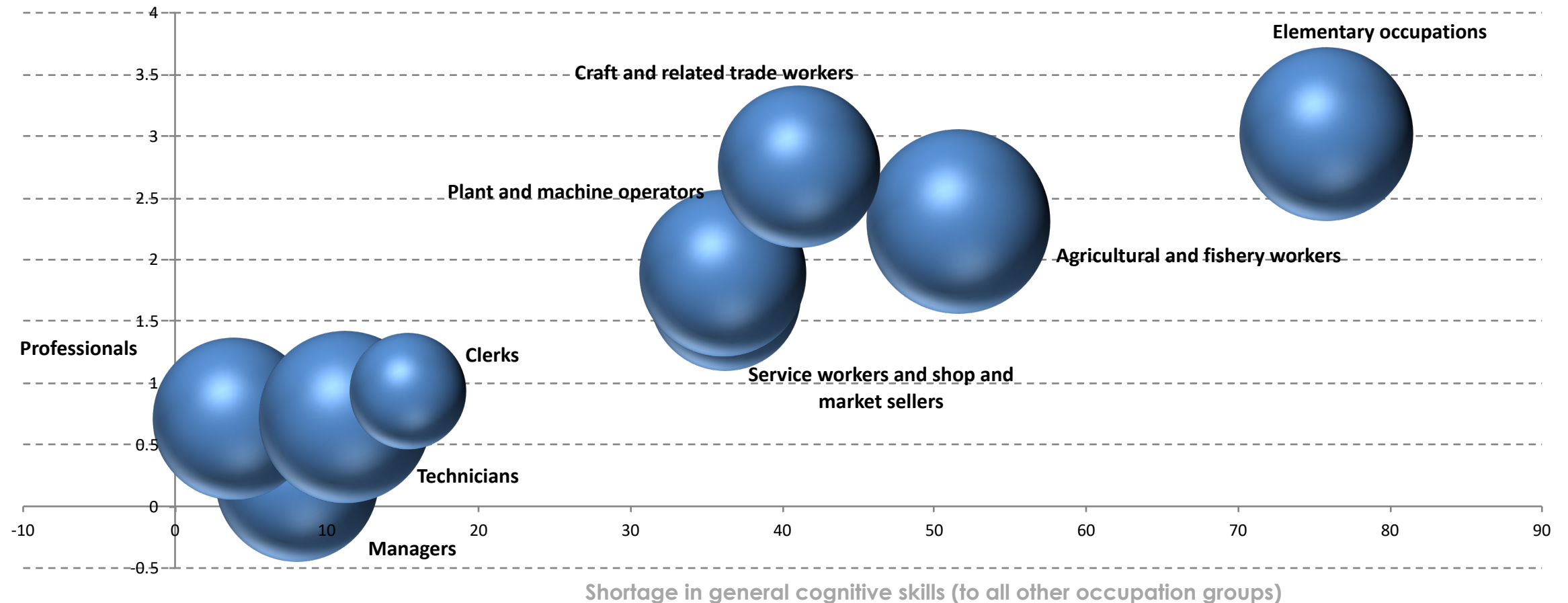


Source: Automation probabilities based on Frey and Osborne (2013)

Distances between occupations, and within occupational groups

Shortage in
task-based skills
(to all other
occupation groups)

SIZE of bubbles : average shortage **WITHIN** groups of occupations in **GENERAL COGNITIVE skills**

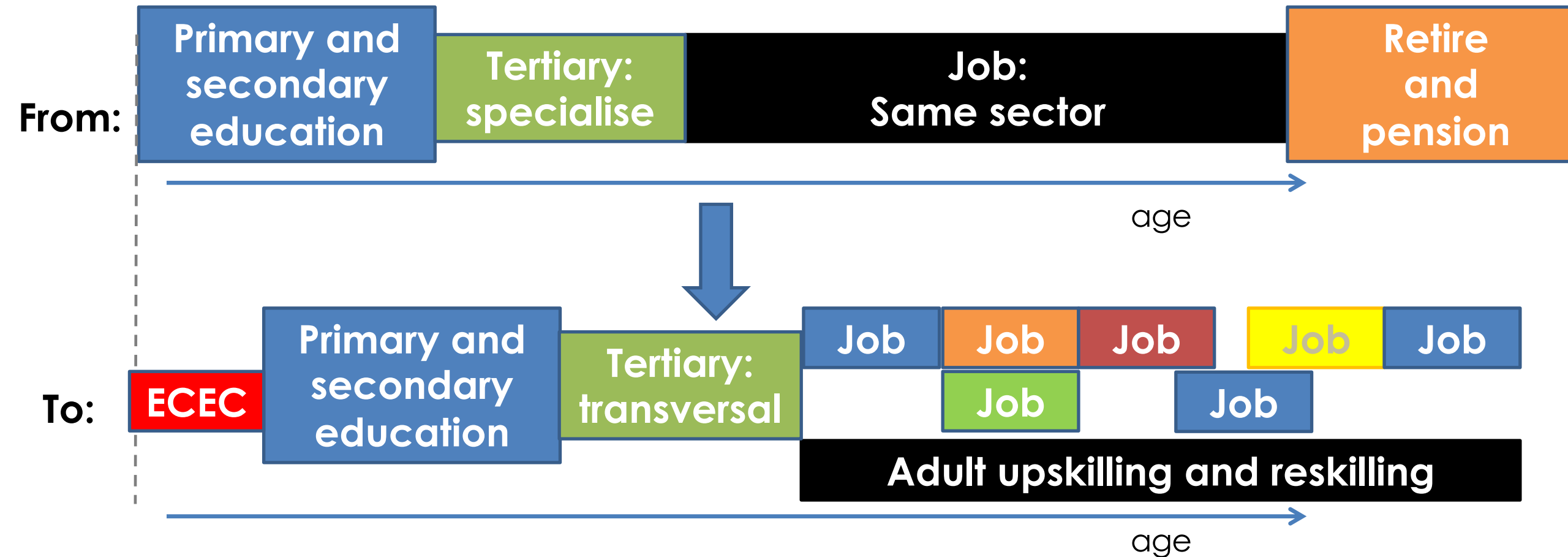




THE BUILDING
BLOCKS OF
**LIFELONG
LEARNING**

Redefining success

Learning, unlearning and relearning throughout life



Policy tools



Regulation. Balancing flexibility with security.



Social protection. Repairing or replacing the safety net?

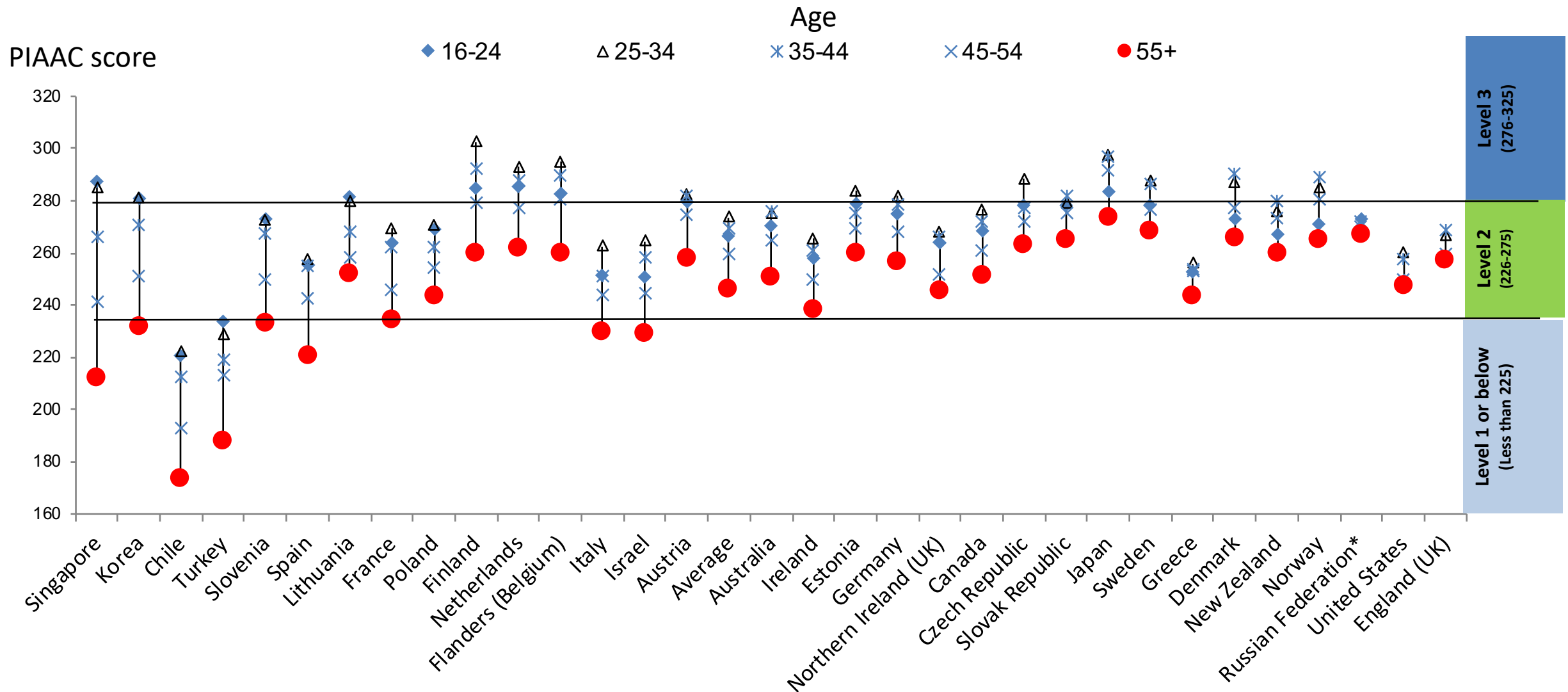


Social dialogue. Rebuilding or reinventing?



Skills. Lifelong learning: from rhetoric to reality.

Some countries are better prepared than others



Governance and funding of lifelong learning

	ECEC	School	VET	Higher Education
Central Government	Social Affairs Education	Education	Education Employment	Education, HE, STI, Economy
Regions/ local authorities				
Employers				
Private providers				

CERTIFYING SKILLS DEVELOPMENT IN A DIGITAL WORLD

- The digital transformation **expands and diversifies education, training and learning opportunities.**
- The **certification of skills becomes increasingly important:** employers need clear signals on workers' skills.
- Firms are increasingly testing skills on their own while relying less on diplomas. **How to certify skills and who should be in charge of it?**
- Preferred option: **Independent regulated systems for skills certification?**

Firms as learning environments

- How is the additional funding shared between Governments, employers and beneficiaries?
- What are the incentives?
- Who sets the standards?
- How are the levels of skills recognised?
- Who trains the trainers?

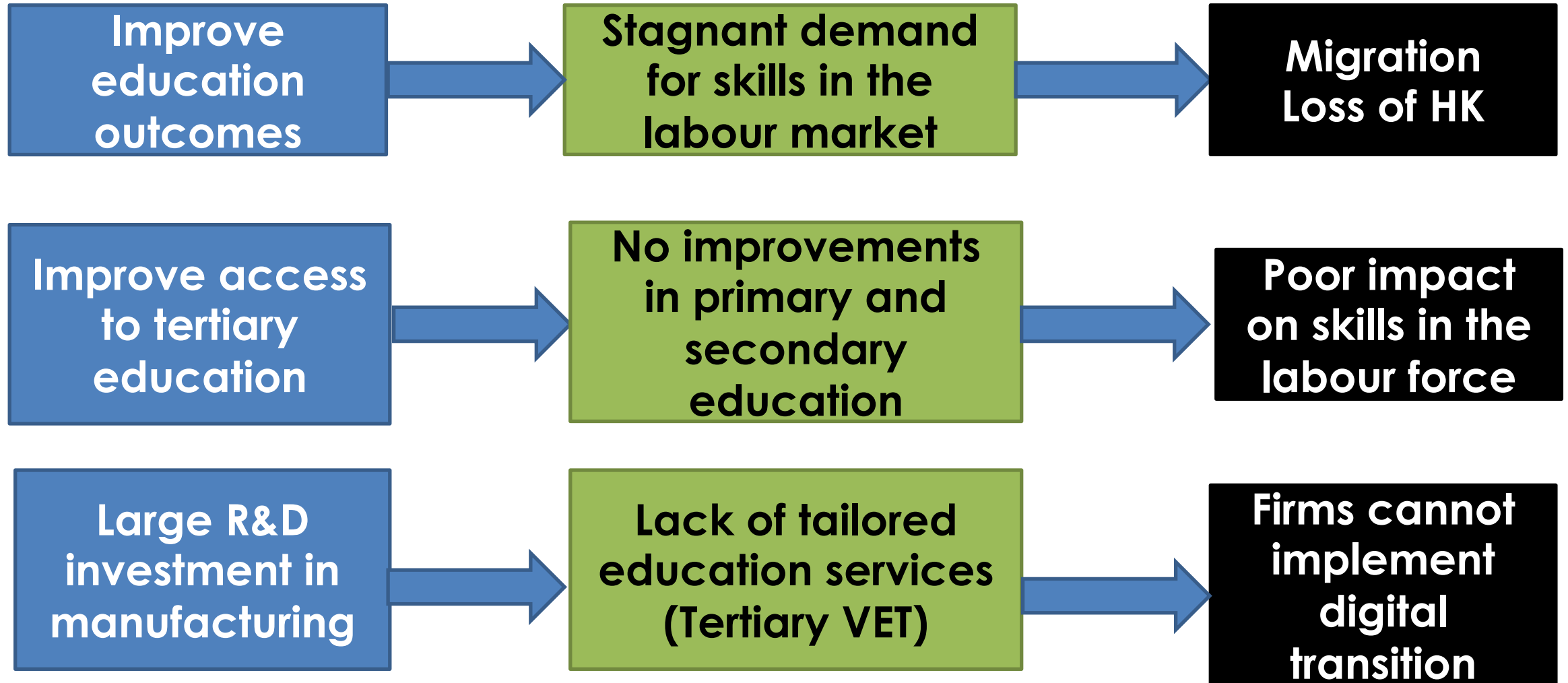
People **outside** firms

- Unemployed: Government. Funding for unemployment benefits, used for training?
- People at high risk of losing their jobs: firms or Government?
- People who want to change jobs
- Gig economy

Governance challenges

- **New forms of work: fewer taxes raised**
- **Ageing societies: higher expenditure in health and pensions**
- **Decentralised information: less control**
- **Link between education and jobs weakened: the role of Governments risks been diminished**
- **Need to predict rapid changes in skills demands and respond to them**

The policy headache: isolated sectoral action may have unintended outcomes



An integrated approach



Governance challenges

Developing
relevant skills

Activating
skills supply

Putting Skills to
effective use

Collaboration across ministries and levels of government

Collaboration with stakeholders

Efficient skills financing

Skills, learning and labour market information

Skills recognition and validation systems

A range of policies is needed to make the most out of the digital transformation

Education policies

to develop the right skills and better harness potential of technology

Labour market policies

to ensure flexibility and adaptability

Industry policies

to foster competitiveness & adopt digital innovations

Housing & transport policies

to ensure mobility of workers

Innovation policies

to adopt and invent of new technologies

Migration policies

to influence supply of skills and support knowledge spillovers

Tax policies

creating incentives for employees and employers to invest in skills

Social policies

ensure social protection for non-standard work contracts & unemployed

Thank you

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